WHAT IS CLAIMED IS:

1. A fluid heating device comprising a housing having an internal chamber and a fluid inlet and a fluid outlet in fluid communication with said internal chamber, said fluid inlet and said fluid outlet each opening exteriorily of said housing; a rotor disposed centrally in said main chamber and mounted for rotation within said chamber about an axis of rotation, said chamber being dimensioned relative to said axis such that the maximum transverse radial distance is greater than the maximum longitudinal distance; said rotor having a plurality of openings formed on at least a face thereof confronting fluid entering said chamber, wherein rotation of said rotor causes said plurality of openings to impart heat-generating cavitation to a fluid entering said chamber.

2. The device according to claim 1, wherein said chamber is a generally hemi-spherical volume and said rotor is in the form of a hemi-spherical element, said rotor in spaced relation to said housing to provide a passage for fluid to travel from said inlet towards said outlet.

3. The device according to claim 2, wherein said fluid inlet is disposed radially closer to said axis of rotation than said fluid outlet.

4. The device according to claim 1 wherein said plurality of openings comprises plural concentric circular arrays of openings formed on said face.

5. The device according to claim 1 wherein said plurality of openings comprises an irregular array of openings formed on said face.

6. The device according to claim 1 wherein said plurality of openings comprises plural substantially radially-extending rows of openings formed on said face.

7. The device according to claim 1, further comprising a drive shaft for imparting mechanical energy to said rotor, said drive shaft supported in said housing by at least two bearings, one of said at least two bearings being nearer a distal end of said rotor and another of said at least two bearings being nearer the proximate end of

said rotor, wherein said drive shaft is provided with a fluid passageway, said fluid passageway connecting said inlet with said chamber.

8. The device according to claim 1, further comprising a rotor assembly comprising said rotor together with at least one additional rotor mounted for rotation therewith, said at least one additional rotor comprising a plurality of cavitation-inducing openings formed therein, said rotor and said at least one additional rotor being axially spaced apart from one another to define a subchamber within said chamber.

9. A fluid heating device comprising a housing having an internal chamber and a fluid inlet and a fluid outlet in fluid communication with said internal chamber, said fluid inlet and said fluid outlet each opening exteriorily of said housing; a rotor disposed centrally in said main chamber and mounted for rotation within said chamber about an axis of rotation, said chamber being dimensioned relative to said axis such that the maximum transverse radial distance is greater than the maximum longitudinal distance; said rotor having a face thereof confronting fluid entering said chamber, wherein rotation of said rotor causes said face to impart heat-generating turbulence and shearing to a fluid entering said chamber.

10. The device according to claim 9, wherein said chamber is a generally hemi-spherical volume and said rotor is in the form of a hemi-spherical element, said rotor in spaced relation to said housing to provide a passage for fluid to travel from said inlet towards said outlet.

11. The device according to claim 10, wherein said fluid inlet is disposed radially closer to said axis of rotation than said fluid outlet.

12. The device according to claim 9, further comprising a drive shaft for imparting mechanical energy to said rotor, said drive shaft supported in said housing by at least two bearings, one of said at least two bearings being nearer a distal end of said rotor and another of said at least two bearings being nearer the proximate end of said rotor, wherein said drive shaft is provided with a fluid passageway, said fluid passageway connecting said inlet with said chamber.

13. A fluid heating device comprising a housing having an internal

chamber and a fluid inlet and a fluid outlet in fluid communication with said chamber, said fluid inlet and said fluid outlet each opening exteriorily of said housing; a rotor mounted for rotation within said chamber about an axis of rotation, said chamber being dimensioned relative to said axis such that the maximum transverse radial distance is greater than the maximum longitudinal distance, said rotor disposed centrally in said chamber in spaced relation to said housing and dividing said chamber into first and second fluid passage gap regions, wherein rotation of said rotor causes fluid entering said inlet to be displaced into at least one of said first and second fluid passage gap regions.

14. The device according to claim 13, wherein said chamber is a generally hemi-spherical volume and said rotor is in the form of a hemi-spherical element.

15. The device according to claim 13, wherein said rotor includes a plurality of openings formed on at least a face thereof to impart heat-generating cavitation to the fluid in at least one of said first and second fluid passage gap regions.

16. The device according to claim 13, wherein said rotor includes on at least a face thereof a generally smooth appearance devoid of any surface irregularities.

17. The device according to claim 13, wherein said fluid inlet is disposed radially closer to said axis of rotation than said fluid outlet.

18. The device according to claim 13, further comprising a drive shaft for imparting mechanical energy to said rotor, said drive shaft provided with a fluid passageway, said fluid passageway connecting said inlet with at least one of said first and second fluid passage gap regions.

19. A method of heating fluids, comprising causing a fluid to enter an inlet of a device comprising a housing having an internal chamber, a rotor mounted for rotation within said chamber about an axis of rotation, said inlet passage and an outlet each opening exteriorly of said housing, and said inlet being disposed radially closer to said axis of rotation than said outlet, said rotor having a plurality of openings formed on a face thereof confronting fluid entering said chamber, while rotating said rotor at a speed sufficient to cause said plurality of openings to impart heat-generating cavitation to a fluid entering said chamber.

20. The method according to claim 19, wherein said device further comprises a rotor assembly comprising said rotor together with at least one additional rotor

mounted for rotation therewith, said at least one additional rotor comprising a plurality of cavitation-inducing openings formed therein, said rotor and said at least one additional rotor being axially spaced apart from one another to define a subchamber within said chamber, and wherein said method further comprising causing said fluid to enter said subchamber while rotating said rotor assembly.